Appl. No. 10/828,910
Amdt. dated May 30, 2006
Reply to Office action of May 5, 2006

REMARKS/ARGUMENTS

Applicants have received the Office Action dated May 5, 2006, which: 1) rejects claims 1-4, 11, 12, and 16-19 under 35 U.S.C. § 102(b) as allegedly anticipated by Locker et al. (U.S. Pat No. 6,477,603, hereinafter "Locker"); 2) rejects claims 5 and 6 under 35 U.S.C. § 103(a) as allegedly unpatentable over Locker in view of Intel Corporation (hereinafter "Intel"); 3) rejects claim 7 under 35 U.S.C. § 103(a) as allegedly unpatentable over Locker in view of Shipe (U.S. Pat. No. 6,760,018); 4) rejects claims 8-10 under 35 U.S.C. § 103(a) as allegedly unpatentable over Locker in view of Shipe and further in view of Gehrke et al. (U.S. Pat. No. 6,310,992, hereinafter "Gehrke"); 5) rejects claim 13-15 under 35 U.S.C. § 103(a) as allegedly unpatentable over Locker in view of PCI Express; 6) rejects 20 under 35 U.S.C. § 103(a) as allegedly unpatentable over Locker in view of Intel.

With this Response, Applicants amend claims 1, 3, 4, 7, 11 and 13; cancels claims 2, 17-20. Therefore, claims 1, 3, 4-16 remain pending. Based on these amendments, cancellations and the remarks that follow, Applicants submit that the pending claims are in condition for allowance and respectfully request reconsideration.

I.   SECTION 102 REJECTIONS

Claims 1-4, 11, 12, and 16-19 under 35 U.S.C. § 102(b) as allegedly anticipated by Locker.

Claim 1 has been amended to recite:

> a first slot configured to receive a device, wherein a first set of lanes of the bus is coupled to the first slot; a second slot configured to receive a device, wherein a _second and different set of lanes_ of the bus is coupled to the second slot (emphasis added); ... inserting a jumper board in the first slot couples the first set of lanes of the bus to the second slot while the jumper board does not occupy the second slot ... _and wherein the slots are implemented together on a board other than the jumper board_ (emphasis added).

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The Office Action suggests that the second set of lanes (Figures 1 and 2, items 208 and 238) in *Locker*, going into the second slot (Figure 2 , item "slot 1") is the same as the first set of lanes going into the first slot (Figure 1, item 210), which is contrary to both the language of claim 1 (as amended) and Figure 3B where two different sets of data lanes (items "Lanes 4-7" and "Lanes 0-3") are shown going into slot 18A and slot 18B respectively. *Locker* does not teach nor suggest two different sets of lanes going into two different slots. Furthermore, the Office Action suggests that item 300 in Figure 1 and Figure 2 in *Locker* is a jumper board. A jumper typically allows for closing a circuit between two pins within the same slot. A jumper board, as described by Applicants in Figure 3B as item 44 and in ¶ [0027], closes multiple circuits among pairs of pins within slot 18A. A riser card is typically an expansion card used to physically extend a slot. *Locker* recites: "FIG. 2 illustrates a riser card 300 ..." (col. 2, line 60), and further explains "In addition to the benefits of system expandability, the present invention achieves the increase in PCI slots ..." (col. 3, lines 2-4). *Locker* does not teach, suggest or recite the functionality of the jumper board described by Applicants in ¶ [0027]. Instead, *Locker*, in Figure 3, teaches the second slot 310 residing on what the examiner construes as a jumper board, item 300. Moreover, the first slot 210 and second slot 310 in locker do not reside on the same board as stated in claim 1. Thus, *Locker's* teachings are directly contradictory to the language of claim 1 as (amended). For at least this reason, *Locker* cannot anticipate claim 1.

Claim 11 has been amended to require: "... wherein the slots are implemented together on a board other than the jumper board", thus reciting similar jumper implementation and slot placement requirements as does amended claim 1 in the previous paragraph; therefore, claim 11 is likewise allowable over *Locker*. Alternatively, claim 11 is also allowable over *Locker* because *Locker* does not teach or suggest a separate means (Figures 3A and 3B, item 42) of coupling a second segment of the first slot 18A to a second segment of the second slot 18B. Claim 11 has been amended to recite: "...coupling a second segment of the first slot via at least one trace to a second segment of the second slot"; instead, Figures 1, 2 and 3 in *Locker* teach a PCI

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Bus (item 208) going directly from the bridge (item 212) to what the Office Action considers the first slot (item 210) and the second slot (item 310). *Locker* does not teach or suggest a direct coupling of the first slot and the second slot. For at least these reasons, claim 11 is patentable over *Locker*.

Claim 4 has been amended to recite: "... a jumper board; ... inserting the jumper board in the first slot ... wherein the slots are implemented on a riser board." Applicants' implementation requires both a jumper board and a riser board, where each board operates differently from the other. *Locker* neither recites nor suggests two separate boards with different functions, but instead explains "... a single PCI slot 210 supports multiple PCI adapter cards through the use of a riser card 300 ..." (column 2, lines 54-55). The Examiner suggests that *Locker's* item 300 performs as both a jumper board and a riser board, which directly contradicts Applicants' implementation. *Locker* does not teach Applicants' implementation between slot 310 and slot 312 in Fig. 3 or between items 210 and 310. Therefore, claim 4 is allowable over *Locker*.

Dependent claims 3, 12 and 16 depend directly or ultimately on allowable base claims and are therefore allowable at least for this reason.

Claim 17 and its dependent claims have been canceled.

II.   SECTION 103 REJECTIONS

Claims 5-10, 13-15, and 20 stand rejected under 35 U.S.C. § 103 as allegedly obvious over *Locker* in conjunction with at least one additional reference. Applicants respectfully traverse this rejection because neither *Locker* nor any of the other references teach or suggest all of the claim elements. For example, independent claim 7, as amended, requires:

> a first slot configured to receive a device, wherein a
> first set of lanes of the bus is coupled to the first slot;
> a second slot configured to receive a device, wherein
> a second and different set of lanes of the bus is
> coupled to the second slot; and ... a jumper board in
> the first slot couples the first set of lanes of the bus to
> the second slot, wherein the first and second sets of
> lanes of the bus each form a serial bus; and wherein

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>   the slots are implemented together on a board other
>   than the jumper board (emphasis added).

As suggested by the Office Action, in *Locker*, the second slot of claim 7 is implemented on the jumper board 300 as item 310 (Figure 3). Thus, *Locker's* teachings are directly contradictory to the language of claim 7 (as amended), which requires that both the first and second slots be on the same board. Therefore, *Locker* cannot render claim 7 obvious. Furthermore, the remainder of the cited art is similarly deficient in this regard and thus claim 7 and its dependent claims are patentable over the cited art for at least these reasons.

Because dependent claims 5, 6, 8-10 and 13-15 depend directly or ultimately on allowable base claims, they are therefore allowable for this reason and by virtue of their further distinctive recitations over the cited references in any combination.

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III.   CONCLUSION

In the course of the foregoing discussions, Applicants may have at times referred to claim limitations in shorthand fashion, or may have focused on a particular claim element. This discussion should not be interpreted to mean that the other limitations can be ignored or dismissed. The claims must be viewed as a whole, and each limitation of the claims must be considered when determining the patentability of the claims.

Applicants respectfully request reconsideration and that a timely Notice of Allowance be issued in this case. However, if the Examiner wishes to resolve any other issues by way of a telephone conference, the Examiner is kindly invited to contact the undersigned at the telephone number indicated below.

Respectfully submitted,

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